## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/24/2010 has been entered.

### *Response to Amendment*

Amendment received on 11/24/2010 is acknowledged and entered. Claims 9, 37 and 38 have been previously cancelled. Claims 1, 11-13, 17-20, 24, 26-27, 34, 36, 39-41, 44 and 46 have been amended. New claims 48-49 have been added. Claims 1-8, 10-36 and 39-49 are currently pending in the application.

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

A. Claims 1-8, 10-36 and 39-47, drawn to method, apparatus and computer readable medium for remote load shedding, classified in class 700, subclass 295.

B. Claims 48-49, drawn to a method for informing a specialized information broadcast company by authorities to initiate rationing, classified in class 705, subclass 7.12.

Inventions A and B are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention B has utility separate from that of inventions A such as requesting by authorities a certain action. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, or patentability requirements, restriction for examination purposes as indicated is proper.

Accordingly, newly submitted claims 48 and 49 are directed to an invention that is independent or distinct from the invention originally claimed.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Therefore, claims 48 and 49 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36 is vague and indefinite. The claim reads as a preamble with no components recited that makes up the system. Furthermore, the claim as a whole appears to state only its intended use. It is not clear what part of the claim is mere intended use (i.e. preamble) and which parts constitute the novel features/ components for performing the recited functionality. Furthermore, the scope of the claim is unclear because none of the following transitional phrases is utilized: "comprising", "consisting" or "consisting essentially of".

### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 34-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 34-35 are directed to a computer program product and computer-readable medium, which covers both transitory/signal and non-transitory medium, and could read on a "signal" which is not statutory subject matter. The following is applied to claims 8-14:

**Subject Matter Eligibility of Computer Readable Media**

The United States Patent and Trademark Office (USPTO) is obliged to give claims their broadest reasonable interpretation consistent with the specification during proceedings before the USPTO. *See In re Zletz*, 893 F.2d 319 (Fed. Cir. 1989) (during patent examination the pending claims must be interpreted as broadly as their terms reasonably allow). The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. *See* MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal *per se*, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter. *See In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101*, Aug. 24, 2009; p. 2.

The USPTO recognizes that applicants may have claims directed to computer readable media that cover signals *per se*, which the USPTO must reject under 35 U.S.C. § 101 as covering both non-statutory subject matter and statutory subject matter. In an effort to assist the patent community in overcoming a rejection or potential rejection under 35 U.S.C. § 101 in this situation, the USPTO suggests the following approach. A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim. *Cf. Animals – Patentability*, 1077 *Off. Gaz. Pat. Office* 24 (April 21, 1987) (suggesting that applicants add the limitation "non-human" to a claim covering a multi-cellular organism to avoid a rejection under 35 U.S.C. § 101). Such an amendment would typically not raise the issue of new matter, even when the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals *per se*. The limited situations in which such an amendment could raise issues of new matter occur, for example, when the specification does not support a non-transitory embodiment because a signal *per se* is the only viable embodiment such that the amended claim is impermissibly broadened beyond the supporting disclosure. *See, e.g., Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473 (Fed. Cir. 1998).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 1-8, 10-24, 26-36, and 40-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehlers et al. (US 5,572,438) in view of Whyte et al. (4,199,761) and further in view of Applicant Admission and NRSC, Setting Standards for the Future of Radio.**

Ehlers teaches a method for automatic management of demand for non-durables, said method comprising:

Claims 1, 20, 34, 36, 40-42,

providing at End-users' premises distributed intelligent home gateways (Abstract; C. 8, L. 12-18; C. 9, L. 39-45), having microprocessor capability for performing the following functions:

receiving broadcast control signals from a Multi Utility provider (C. 25, L. 9-10, 16-17),

End-users programming said boxes by setting parameter values in accordance with End-users' priorities (suggests storing algorithms and End-user adjustable parameter value settings) (C. 10, L. 28-30),

broadcasting from a Multi Utility provider a control signal to be received by said gateways (C. 12, L. 17-18),

said gateways taking automatic turn-off or turn-on action for some non-durable consuming apparatuses in accordance with stored control algorithms, parameter values set by said End-users and information provided by said control signal (C. 13, L. 41-59); wherein said gateways comprising a metering gateway transmitting back to said Multi Utility provider, through a telephone or mobile telephone network, instant or semi-instant non-durable consumption values measured at said End-users' premises by said electronic boxes (C. 15, L. 3-13).

Ehlers does not explicitly teach determining whether information contained in said broadcast control signals, stored algorithms and End-user adjustable parameter value settings satisfies a condition for any connected non-durable consuming apparatus to be switched on, and if so, turning connected non-durable consuming apparatuses on, if not, turning connected non-durable consuming apparatuses off.

However, Ehlers teaches calculating a status flag of each device on the system, checking the status flag and generating a command to restore power to the load, said status flag is changed whether the load in ON or OF condition, wherein said status flag is changed, also, during timed event (C. 25, L. 32-36).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ehlers to include calculating whether ON or OFF constitutes a correct condition for any connected non-durable consuming apparatus, on the basis of information contained in said broadcast control signals,

stored algorithms and End-user adjustable parameter value settings, turning connected non-durable consuming apparatuses on and off in accordance with the results of said calculating, as suggested in Ehlers, because it would advantageously prevent the load from being turned on when the load shedding operation was initiated by the power utility, as specifically stated in Ehlers (C. 25, L. 37-41).

Also, while Ehlers teaches that the utility company can communicate with said gateways over the radio (C. 4, L. 18), Ehler does not explicitly teach transmitting at least one radio broadcast control signal, which is received by said radio receiver in all said gateways; wherein said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems.

Whyte et al. (Whyte) discloses a method for multichannel radio communication system, wherein VHF-FM commercial broadcast stations provide readily available transmitter sources to link remote terminals at electric power customer locations with a central station/utility company utilizing tone signals. In use the broadcast station receives base-band binary data signals from the central control station of an electric power distribution system, said data signals are intended for signaling one or more command or control functions to energy management terminals at a plurality of End-users remote locations to be controlled and monitored, such as turning on or off end users' appliances like water heaters and A/C equipment (C. 2, L. 35-68; C. 4, L. 24-30; C. 5, L. 55-60; C. 6, L. 4-15; C. 7, L. 3-8).

It would have been prima face obvious to one having ordinary skill in the art at the time the invention was made to modify Ehler to include transmitting at least one

radio broadcast control signal, which is received by said radio receiver in all said gateways, as disclosed in Whyte, because it would allow to implement said arrangement in the existing systems without network disruption, thereby minimizing cost. Alternatively, it would have been prima face obvious to one having ordinary skill in the art at the time the invention was made to modify Ehler to include the recited limitation, as disclosed in Whyte, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable. The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art. KSR, 550 U.S. at, 82 USPQ2d at 1395; Sakraida v. AG Pro, Inc., 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); Anderson's-Black Rock, Inc. v. Pavement Salvage Co., 396 U.S. 57, 62-63, 163 USPQ 673, 675 (1969); Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147, 152, 87 USPQ 303, 306 (1950).

The combination of Ehler and Whyte does not explicitly teach that said broadcasting station utilizes any one of the RDS, RBDS and DAB systems.

However, as Applicant admitted, "Radio transmitters that utilize RDS, RBDS and/or DAB technique is known as such". (*See:* Applicant Arguments/Remarks Made in an Amendment of 10/22/2009, page 13, lines 8-9). For example, in 1998, the National

Radio Systems Committee approved a revised edition of the United States Radio Broadcast Data System (RBDS) Standard. The National Radio Systems Committee (NRSC) is jointly sponsored by the National Association of Broadcasters (NAB) and the Consumer Electronics Association (CEA). Its purpose is to study and make recommendations for technical standards that relate to radio broadcasting and the reception of radio broadcast signals. It is also noted that US RBDS Standard is based largely on the European RDS Standard, the latest version of which was published by the European Committee for Electrotechnical Standardizationin 1998 (*See*: NRSC, Setting Standards for the Future of Radio (NRSC).

Accordingly, it would have been prima face obvious to one having ordinary skill in the art at the time the invention was made to modify the combination to include that said Multi Utility provider broadcasts the control signal via at least one radio broadcasting station utilizing any one of the RDS, RBDS and DAB systems, as disclosed in NRSC and admitted by Applicant, because it would advantageously allow to operate in accordance with US RBDS Standard.

Claim 2. The method of claim 1, wherein said End-users set parameter values in accordance with estimated importance (priority) of their various apparatuses (Ehlers; C. 12, L. 32-33; C. 29, L. 59-63).

Claim 3. The method of claim 1, wherein said End-users set parameter values based on pricing of the non-durables (Ehlers; C. 12, L. 17-18).

Claim 4. The method of claim 1, wherein said Multi Utility provider broadcasts a control signal containing pricing information regarding said non-durables (Ehlers; C. 12, L. 2-18; C. 15, L. 7-8).

Claim 5. The method of claim 1, wherein said End-users set parameter values based on pricing of the non-durables (Ehlers; C. 12, L. 17-18).

Claim 6. The method of claim 1, wherein said Multi utility provider broadcasts a control signal containing information regarding rationing (Ehlers; C. 3, L. 18-22).

Clam 7. The method of claim 1, wherein said Multi Utility provider provides at least one of electrical energy, thermal energy, gas and freshwater to a community of End-users (Ehlers; C. 15, L. 7-8).

Claims 8, 21. The method of claim 1, wherein said Multi Utility provider broadcasts the control signal via at least one commercial radio broadcasting station (Whyte; C. 3, L. 7-9; C. 9, L. 26-32).

Claims 10, 22. The method of claim 1, wherein said Multi Utility provider broadcasts the control signal via a satellite radio broadcast system (use of TV suggests satellite communication).

Claims 11, 23. The method of claim 1, wherein said boxes transmit back consumption values via any of a telephone network and a mobile telephone network (Ehlers; C. 15, L. 12).

Claims 12, 24. The method of claim 1, wherein communication between said electronic boxes and said non-durable consuming apparatuses inside said End-users' premises is effected by use of PLC technology, preferably in accordance with an X10 standard (Ehlers; C. 15, L. 14).

Claim 13. The method of claim 1, wherein any one of said gateways is physically or functionally divided in an intelligent home gateway and a metering gateway, said intelligent home gateway receiving said control signals, decoding them, determining ON and OFF conditions for all connected apparatuses and transmitting turn-off and turn-on commands to bring said apparatuses into the determined condition, while also communicating with said metering gateway, and said metering gateway performing two-way communication with said intelligent home gateway, performing communication with at least one non-durables metering device, and transmitting at least metering data to said Multi Utility provider (same reasoning as applied to claim 1).

Claim 14. The method of claim 13, wherein said intelligent home gateway transmits commands for turning connected apparatuses in an End-user's premises off and on, via a Power Line Carrier (PLC) system, preferably an X10 system (Ehlers; C. 5, L. 22).

Claim 15. The method of claim 13, wherein said intelligent home gateway turns off connected apparatuses in an End-user's premises in accordance with non-durable price thresholds set by the End-user for respective apparatuses or for respective apparatus groups (same reasoning as applied to claim 1).

Claim 16. The method of claim 13, wherein said intelligent home gateway turns off connected apparatuses in an End-user's premises in accordance with a rationing command from said Multi Utility provider and non-durable consuming apparatus priority settings entered by the End-user (Ehlers; C. 3, L. 18-22 and reasoning applied to claim 1).

Claim 17. The method of claim 1, wherein non-durables production in distributed generation units (DG) attached to any of industrial End-users, commercial End-users and groups/communities of private End-users, is governed by said gateways and in accordance with the End-users' settings and priorities (same reasoning as applied to claim 1).

Claim 18. The method of claim 17, wherein a distributed generation unit (DG) attached to a group/community of private End-users is governed by an algorithm taking all said private End-users' settings and priorities into consideration, said algorithm being stored in a computer memory in a computer dedicated for controlling said distributed generation unit and being in communication with said gateways (Same reasoning as applied to claim 1).

Claim 19. The method of claim 1, wherein service restoration from said Multi Utility provider after an outage situation is effected by broadcasting restoration signals to bring about step-wise turning on loads at End-users' premises by appropriate action by said gateways (Ehlers; C. 25, L. 16-20).

Claims 26-33, 35, and 47, same reasoning as applied above.

Claims 43 and 45. The method of claim 1, wherein said method further comprises the step of: providing to the End-users prices in real time (Ehlers; C. 15, L. 7-8; C. 32, L. 46-48).

Claims 44 and 46. The method of claim 1, wherein said method further comprises the step of: said gateways transmitting back to said Multi Utility provider instant or semi-instant non-durable consumption values at said End-users' premises

(Ehlers; C. 15, L. 9-11), thereby collectively influencing market pricing of said non-durables (Ehlers; C. 32, L. 46-55).

**Claims 25 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehlers et al. (US 5,572,438) in view of Whyte et al. further in view of Applicant Admission and NRSC and further in view of Ehlers et al. (US 2004/0117330 A1).**

Claims 25 and 39. The combination of Ehlers '438, Whyte, Applicant Admission and NRSC teaches all the limitations of claims 25 and 29, except that said broadcasting network includes microprocessor capability for encrypting data to be broadcast to End-users.

Ehelrs '330 teaches a method and system for controlling usage of a commodity, wherein data communicated between end users and utility provider is encrypted [0302].

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the combination to include that said broadcasting network includes microprocessor capability for encrypting data to be broadcast to End-users, as disclosed in Ehelrs '330, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable. The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as

claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art. KSR, 550 U.S. at, 82 USPQ2d at 1395; Sakraida v. AG Pro, Inc., 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); Anderson's-Black Rock, Inc. v. Pavement Salvage Co., 396 U.S. 57, 62-63, 163 USPQ 673, 675 (1969); Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147, 152, 87 USPQ 303, 306 (1950).

***Response to Arguments***

Applicant's arguments filed 11/24/2010 have been fully considered but they are not persuasive.

In response to applicant's argument that Ehlers fails to teach taking automatic turn-off or turn-on action for some non-durable consuming apparatuses in accordance with stored control algorithms, parameter values set by said End-users and information provided by said control signal, it is noted that Ehlers teaches that in accordance with an algorithm, screens are presented to the customer on the display of second microcomputer 22 for entering parameter values (C. 13, L. 41-59), and the automatic turn-off or turn-on action is conducted following receiving the broadcasted control signal (C. 25, L. 9-10).

In response to applicant's argument that Ehlers fails to teach end-users programming said gateways by setting parameter values in accordance with End-users' priorities, the examiner stipulates that Ehlers discloses said feature at C. 10, L. 13-30.

In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, all references are related to the same field of endeavor, and the motivation to combine would be implementing said arrangement in the existing systems without network disruption, thereby minimizing cost.

Alternatively, it would have been prima face obvious to one having ordinary skill in the art at the time the invention was made to modify Ehler to include the recited limitation, as disclosed in Whyte, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable. The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements

were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art. KSR, 550 U.S. at, 82 USPQ2d at 1395; Sakraida v. AG Pro, Inc., 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); Anderson's-Black Rock, Inc. v. Pavement Salvage Co., 396 U.S. 57, 62-63, 163 USPQ 673, 675 (1969); Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147, 152, 87 USPQ 303, 306 (1950).

The remaining Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Igor Borissov whose telephone number is 571-272-6801. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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